

DIRECTIONS *for*  
CARE *and* CLEANING

STYLE 3E  
Monotype  
Composition Mold

FOR CASTING IN JUSTIFIED LINES (WITH  
EITHER HIGH OR LOW QUADS AND  
SPACES) OR AS SORTS, ANY GIVEN POINT  
SIZE FROM 5 TO 12 POINT INCLUSIVE

TRADE MARK  
MONOTYPE  
Reg. U. S. Pat. Off.

LANSTON MONOTYPE  
MACHINE COMPANY

PHILADELPHIA, PA., U.S.A.

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IN  
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# Directions for Care and Cleaning

## STYLE 3E

### Monotype Composition Molds

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#### Cautions

1. Read these directions carefully in the order in which they are given. The cautions should be read twice—once before taking the MOLD apart and a second time after the MOLD is reassembled but before putting it on the MACHINE.

2. **Cross Block Adjustment:** A new or repaired MOLD requires special attention until the CROSS BLOCK has found its true bearing against the TYPE BLOCKS while running under actual working conditions. The CROSS BLOCK is adjusted before shipment, but before putting the MOLD on a MACHINE this adjustment should be checked to be sure it has not been jarred loose in shipment. Check again after the MOLD has run an hour, after half a day, and after a full day. If at any of these times the adjustment is loose or uneven, it should be readjusted. Do not, however, adjust the CROSS BLOCK too tightly—it should be a free running fit—as free as possible without casting a burr on the type.

3. **Waterways:** Prevent rust. When the MOLD is taken off the MACHINE blow out all water from the water passages by means of the air blast and oil them thoroughly by blowing oil through them.

4. **Operating Lever 29H:** For this Style 3E MOLD the OPERATING LEVER 29H is moved to the rear into the rear notch in the PISTON LEVER 18H; that is, the notch with two little marks over it.

5. **Water:** Use as little water as possible—just enough to prevent blistered type and bleeding feet. The water from the MOLD should be as hot as can be borne on the hand.

6. **Oiling:** Each time a MOLD is put on a MACHINE, fill both oil holes from the hand oil-can unless the MOLD OILER has opportunity to work long enough to fill these holes before the MOLD is started. Our MOLD OILER, regulated to give one drop of MONOTYPE TYPE MOLD OIL every two or three minutes, will provide ample oiling except for the CROSS BLOCK COUPLING, which must be oiled by hand. Keep the top of the MOLD free from oil.

7. **Starting Casting:** When putting on a MOLD turn the CASTING MACHINE back until it comes to the STOP; this is the position to put a MOLD on or take it off. Be sure the MOLD and its seat on the MACHINE are clean. Tighten the CLAMPS and SCREWS holding the MOLD in position. Oil the MOLD by hand and see that the MOLD OILER is prop-

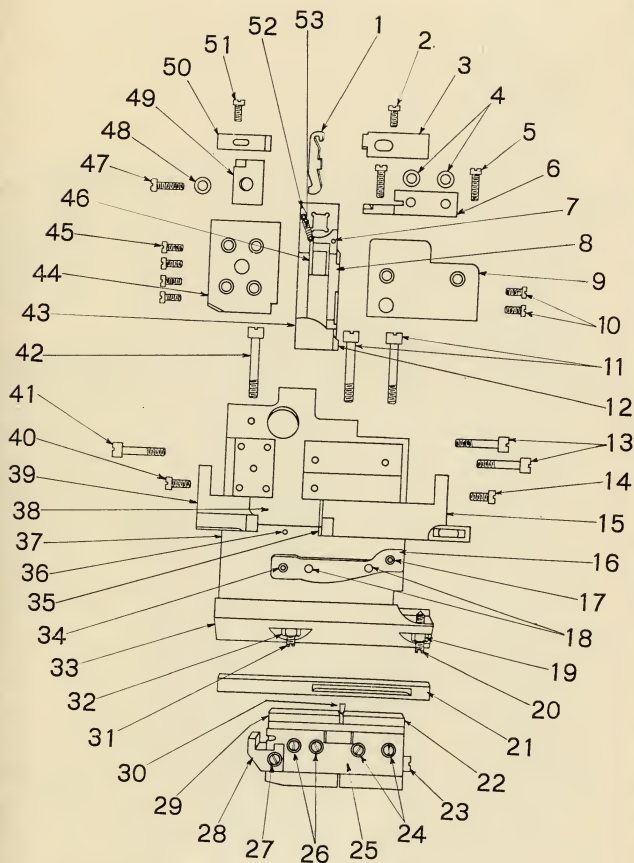


Figure 1.

erly adjusted, turn on the water, check the metal temperature, turn the MACHINE over once or twice by hand to be sure everything is working properly—then start the MACHINE, not before.

**8. Gate Pusher:** Only in our factory can a new GATE PUSHER be properly fitted, and requires return of the MOLD, or CROSS BLOCK, or all parts of the GATE PUSHER if broken but in condition to obtain necessary measurement.

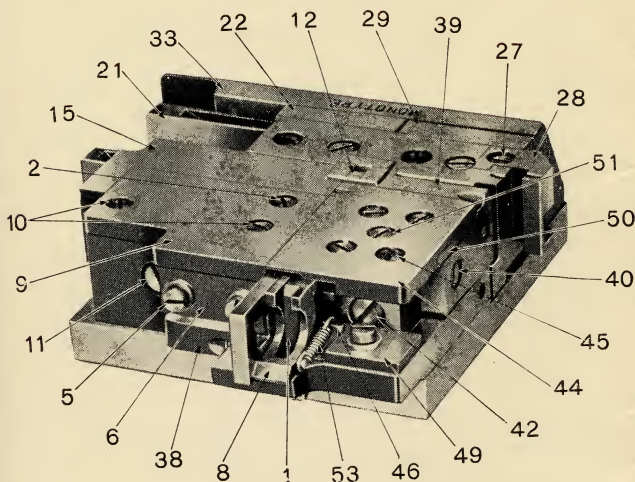


Figure 2.

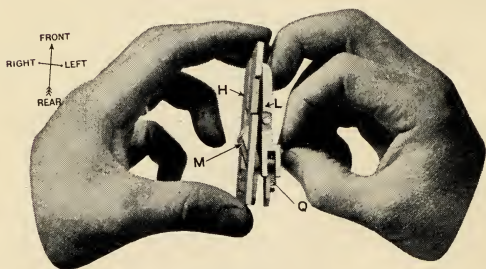


Figure 3.

Taking apart or assembling bottom BLADE and CARRIER.

**9. Low Quads:** Never run low quads and spaces without a MATRIX CASE in position, as to do so would damage the MOLD.

**10. Metal Temperature:** Do not run metal too hot—not over 725 degrees on standard Monotype metal. Slightly higher temperature is required for extra hard metal which must be run with special care. This Style 3E MOLD will run metals a little cooler than previous molds.

**11. Mold Blade:** When assembling the BLADE and CARRIER make sure they are flush with each other on the bottom. Hold them down firmly when putting them into or taking them out from the MOLD. Never force the BLADE over the NICK PIN nor attempt to lift the rear end until the BLADE clears the NICK PIN. Do not tap the rear end of the BLADES when assembling them in the MOLD.

**12. Bridge Setting:** To prevent wear and damage to MOLDS and MATRICES watch the BRIDGE setting and test it frequently by means of the CARRYING FRAME ADJUSTING GAGE.

**13. Restoring-to-height:** Wear of the MATRIX SEATS affects height-to-paper of the type. To determine the amount of wear, measure the high quad which should never be less than .8865", while many will want to restore-to-height sooner. Quads .888" high make the type exactly type high (.918") but new MOLDS are made to cast a little higher to allow for wear.

**14. Mold Repairs:** The parts of this MOLD are made by experienced workmen trained for this special work and provided with the finest of tools, gages, and testing machines. No operator, however skillful, can repair a worn or damaged MOLD. Do not rub or lap any of the parts. When returning a MOLD for repair, enclose with it samples of the type and high and low quads and spaces it produces and furnish us a statement of the troubles to be corrected.

### **TAKING APART** **Re-read the Cautions**

All references to "right," "left," "front," and "back," are as a MOLD on the MACHINE would appear to the operator standing in front of the MACHINE.

**15.** Prepare a suitable place for taking the MOLD apart. Spread down a clean sheet of paper and, as the parts are taken off the MOLD, place them on this paper. Have the hands clean and free from particles of metal.

**16.** Remove the CROSS BLOCK 25 (complete) toward the right and take its GATE PUSHER 30 out from it. Remove the FRONT ABUTMENT SHOE 21.

**17.** Remove the four SCREWS 45 and take off the SHOE 44. Remove the two SCREWS 10 and take off the SHOE 9.

**18.** Lift out the LATCH LEVER 1 by pushing up on its lower end to disengage it from its PIN 7.

**19.** Remove SCREW 51 and take off GUIDE 50. Remove the two SCREWS 5 with their WASHERS 4 and take off STOP 6. Remove SCREW 47 with its WASHER 48 and take off GUIDE BLOCK 49. Remove SCREW 2 and take off SHOE 3.

**20.** Hold the BLADE 43 and CARRIER 8 down firmly on the WATER BASE 38 and at the same time draw them out of the MOLD toward the rear. Do not attempt to lift them or to raise the rear end until they have been drawn back far enough to clear the NICK PIN 35.



21. Separate the top MOLD BLADE 12 from the MOLD-BLADE CARRIER 8 by lifting the top BLADE straight up. Remove the bottom BLADE 43 from the CARRIER 8 by pushing forward on the left end of the LATCH 46. (The method of doing this is shown in Fig. 3.)

22. The MOLD is now ready to be cleaned. As long as the type produced is correct and there is no water leak, there is no good reason for removing either TYPE BLOCK 15 or 39 and there are several good reasons for not removing them. The MOLD is perfectly accessible for cleaning with both BLOCKS in place. When necessary these TYPE BLOCKS 15 and 39 may be removed but usually only one will need to be taken off.

23. To remove the right TYPE BLOCK 15 take out the SCREW 14 from its right side, two SCREWS 13 from the under side and two SCREWS 11 from the rear. Slide BLOCK 15 off to the right. To remove the left TYPE BLOCK 39 take out the SCREW 40 from the left side, the SCREW 41 from the under side and the SCREW 42 from the rear. Slide BLOCK 39 off to the left. The SCREWS 13 and 41 to the under side of the two TYPE BLOCKS 15 and 39 are the three in line (from left to right) with the rear edge of the NOZZLE HOLE bevel in the under side of the BASE PLATE 37. No other SCREWS from the under side of the BASE PLATE should be touched except to see that they are tight.

24. **Caution:** The WATER BASE 38 is never to be taken off the BASE PLATE 37, nor its screws loosened or disturbed in any way. To do so would necessitate returning the MOLD to our factory for resetting this part by means of a special gage. The front ABUTMENT 33 should never be taken off unless the CROSS BLOCK becomes jammed by a squirt (as when the GATE PUSHER is left out) so that it cannot be freed otherwise.

### CLEANING

25. Clean carefully all parts of the MOLD that have been taken off, being especially careful to remove all particles of type metal from them. The slot between the GATE BLOCKS 22 and 29 in which the GATE PUSHER 30 operates should be given special attention as on its perfect cleanliness depends the proper operation of the GATE PUSHER 30.

26. If neither TYPE BLOCK 15 or 39 has been removed, then the slot between them for the MOLD BLADE must be cleaned with special care. After it is made as clean as possible, slide the BLADE 43 assembled on its CARRIER 8 into place from the rear while holding them down firmly against the WATER BASE. Push them through far enough so the front end projects beyond the front face of the TYPE BLOCKS 15 and 39 and wipe any dirt from their front end that may have been pushed through the slot by the BLADE. Withdraw the BLADES to the rear while still holding them down firmly on the WATER BASE. This will clean the corners of this opening, but it will not be effective unless the slot has first been cleaned with a cloth as thoroughly as possible.

27. If one of the TYPE BLOCKS 15 or 39 has been removed, as may be necessary if type metal is sticking fast to the face of the BLOCK, be especially careful to clean it and all three surfaces against which it bears. Any deposit or corrosion around the waterways in either BLOCK or WATER BASE must be carefully and thoroughly removed. Any particles of this left would cause water leaks or other trouble. Slide the TYPE BLOCK carefully into place toward the MOLD BLADE opening while holding it against two of its bearing surfaces. Remove it and wipe off any dirt pushed before it.

### ASSEMBLING

28. Be sure all parts are clean (re-read directions under the heading "Cleaning"), also that your hands are clean and that there is no dirt or particles of type metal on the paper on which the parts are laid.

29. If the right TYPE BLOCK 15 has been removed, slide it into place from the right while holding it against the two surfaces of the WATER BASE 38; remove it, wipe off any dirt pushed before it, and again slide it into place, making certain that there is no dirt between the lug on its right end and the right side of the lug on the WATER BASE 38, as on this depends the accuracy of the point size. Insert and bring up to bearing the SCREW 14 from the right, the two SCREWS 13 from the bottom and the two SCREWS 11 from the rear. Then go over these SCREWS in the same order and tighten them gradually until they are all up solid.

30. If the left TYPE BLOCK 39 has been removed, it is to be applied in a manner similar to that described above for the right TYPE BLOCK.

31. If either TYPE BLOCK after assembly fails to contact perfectly the three surfaces on the WATER BASE due to particles of type metal getting between, it will cause a water leak or burrs on the top or side of the type. The remedy is obvious—take the BLOCK off and clean the surfaces.

32. Assemble the BLADES 43 and 12 on the CARRIER 8. To put the lower BLADE 43 onto CARRIER 8, push forward on the tail of the LATCH 46 just enough to slip the MOLD BLADE 43 into position over the front end of the LATCH 46. (See also Fig. 3.) Be sure the BLADE 43 and CARRIER 8 are flush on the bottom. Then put the top BLADE 12 on the CARRIER 8, working it carefully into position with the fingers and be sure it is perfectly flush on both sides with the lower BLADE 43.

33. Slide this combined CARRIER 8 and BLADES 12 and 43 into the MOLD from the rear, keeping them pressed down firmly and push them forward into casting position. Be careful not to damage the corners on the casting end of the BLADE 43 nor to try to force the BLADE over the NICK PIN 35.

34. Put on SHOE 3 with its SCREW 2. This SHOE should be positioned so it bears against the top but not against

the side of the **BLADE 43**. Tighten its **SCREW 2** and try the **BLADE 43** to see that it moves smoothly without binding.

**35.** Replace the **GUIDE BLOCK 49** and bring it up to gentle bearing against the side of the **CARRIER 8**; clamp it with its **SCREW 47** and **WASHER 48** and test to see that this has not changed the feel of the **BLADE 43** as it is moved back and forth.

**36.** Replace the **STOP 6** with its two **SCREWS 5** and **WASHERS 4** and clamp it so that it just touches the side of the **BLADE 43** but does not bind it.

**37.** Put on **GUIDE 50** with its lug on top and insert its **SCREW 51** but do not tighten it.

**38.** Put the **LATCH LEVER 1** in position, pressing forward on the tail of **LATCH 46** to be sure the **LEVER 1** drops into position over its **PIN 7**.

**39.** Replace **TOP GUIDE 9** and tighten its two **SCREWS 10**. Replace **SHOE 44** (bringing it close to **TOP GUIDE 9**) and tighten its four **SCREWS 45**. Test the **BLADES 43** and **12** again, moving them together and separately, to be sure they move smoothly and evenly without binding.

**40.** Push against the left end of **GUIDE 50** to bring it up to gentle bearing against the side of the **MOLD BLADE** and tighten its **SCREW 51**. Note that **GUIDE 50** is put on first (see paragraph **37**) but is not adjusted until after **SHOE 44** is put on. Try both **BLADES** again to be sure they move freely after this adjustment.

**41.** Leave the **GATE PUSHER** out of the **CROSS BLOCK** for the following test but don't forget to put it in afterward. Oil all the bearing surfaces of the assembled **CROSS BLOCK 25**, also its bearings in the **MOLD** and the **SHOE 21**. Turn the **MOLD** up on its left end with the bottom toward you. Put **SHOE 21** in place and hold it there while carefully entering the **CROSS BLOCK** into its place in the **MOLD**. Push the **CROSS BLOCK** carefully all the way in. Turn the **MOLD** onto its **BASE** and test the "feel" of the **CROSS BLOCK** as it is pushed back and forth. It should move smoothly and evenly from one end to the other and should be a fairly free running fit, requiring but little pressure of the fingers to move it. If too loose, too tight, or not even at all points, move the **CROSS BLOCK** to casting position, readjust the two **SCREWS 31** and **20**, tighten their **LOCK NUTS 32** and **19** and test again to see that the feel of the **CROSS BLOCK** is correct.

**42.** Remove the **CROSS BLOCK** and replace the **GATE PUSHER 30** in its slot between the **GATE BLOCKS 22** and **29**, having the square finished end of the **PUSHER 30** to the rear, toward the casting point. Work the **GATE PUSHER 30** back and forth while pressing it into its slot and make sure its bottom edge comes flush with the edges of its slot. Replace the **CROSS BLOCK** in the **MOLD** as described in paragraph **41**, making sure the **GATE PUSHER** is positioned so it will go over its **CAM** as the **CROSS BLOCK** is pushed in.

**43.** The parts of the **CROSS BLOCK** should never need readjustment unless they work loose or a new **GATE**



PUSHER 30 is to be applied. The only part of the CROSS BLOCK which is adjustable is the GATE BLOCK 22. (Never move GATE BLOCK 29 nor loosen its SCREWS.) To adjust GATE BLOCK 22, take out its two SCREWS 24 from the top and its two SCREWS from the front (not shown), also back off its ADJUSTING SCREW 23 in the right end. Clean the BLOCK 22 and its bearing on the CROSS BLOCK 25. Replace BLOCK 22 with the GATE PUSHER 30 in position and insert and bring up to bearing the four SCREWS to the GATE BLOCK 22. Screw in ADJUSTING SCREW 23 until the GATE PUSHER 30 is a snug fit between the GATE BLOCK 22 and 29, moving smoothly but without looseness and not forced beyond the face of the GATE BLOCKS. Tighten the four SCREWS to the GATE BLOCK 22 and test the GATE PUSHER 30 to be sure its adjustment has not been changed. See that the ADJUSTING SCREW 23 is very tight against the end of GATE BLOCK 22, but do not force it.

#### **SPECIAL CAUTIONS:**

44. After assembly, test with a straight edge across the top of the TYPE-BLOCK MATRIX SEATS. If not perfectly in line, something is holding one BLOCK out of position—correct it. Then put MOLD on machine, run until hot, and check the type by measuring six pieces together. If the type is too large pointways or off parallel pointways or setways, or if there is a water leak it is due to only one thing—the two TYPE BLOCKS 15 and 39 have not been correctly assembled on the WATER BASE 38. This means taking the TYPE BLOCKS off and finding what is holding them from their true position—probably some dirt or particle of metal.

45. **Never** under any circumstances try to correct any trouble by altering parts of the MOLD. To do so will only cause permanent trouble which will necessitate the MOLD being returned to the Monotype Factory for repair.

46. **Top Stand must be true.** Two tests. (a) Rub Prussian Blue very thin (just to give color) on TOP STAND where MOLD feet come. Put on MOLD without fastening and move it slightly. If blue does not show on opposite sides of each screw hole on MOLD feet it indicates probable distortion when MOLD is regularly applied. (b) Adjust CROSS BLOCK at bench and slide it back and forth several times with the fingers to get the "feel." Put MOLD on machine, tighten CLAMPS and SCREWS, do not connect CROSS BLOCK. Move CROSS BLOCK with fingers—if "feel" is different than when on bench it indicates distortion of MOLD by dirt under feet or worn or damaged TOP STAND. This may affect parallelism or size of type, cause burrs, undercut, etc. or damage to MOLD. Test MOLD BLADE for "feel" in similar manner for like reasons. Remedy for worn TOP STAND—rescrape in plant or regrind in our factory.

**Read again the "Cautions" in the forepart of these directions before putting the Mold on the Machine.**

# Names *and* Symbols of Parts of the Style 3E

## Monotype Composition Mold

BASE PLATE..... 1MA3E1  
bushing (2)..... 1MA3E2  
" (for 6MA3E3) (2)..... 1MA3E4

BASE PLATE FRONT ABUTMENT.....\* 2MA3E1  
adjusting screw (left, blunt).....**2226**.\* 2MA3E2  
" " (right, pointed).....**2227**.\* 2MA3E3  
" " lock nut (2).....**386**.\* 2MA3E4  
screw (3).....**223**.\* 2MA3E5

BASE-PLATE-FRONT-ABUTMENT NUMBER  
PLATE..... 3MA3E1  
screw (2).....**251**.\* 3MA3E2

BASE-PLATE-FRONT-ABUTMENT SHOE.....\* 5MA3E1

BASE-PLATE-GATE-PUSHER Cam..... 6MA3E1  
screw (2).....**2166**.\* 6MA3E2  
dowel (2).....**7104**.\* 6MA3E3

CROSS BLOCK..... 1MB3E1  
coupling.....†1MB3E2  
" screw.....**2165**.\* 1MB3E3  
dowel (to 3MB3E1)..... 1MB3E4  
screw (to adjust 2MB3E1).....**2167**.\* 1MB3E5

†Note: The old COUPLING or all broken parts of it must be returned for duplication.

CROSS-BLOCK GATE BLOCK (right)..... 2MB3E1  
screw (front) (2).....**236**.\* 2MB3E2  
" (top) (2).....**2228**.\* 2MB3E3

CROSS-BLOCK GATE BLOCK (left)..... 3MB3E1  
oil pad (felt).....\* 3MB3E2  
screw (front) (2).....**236**.\* 3MB3E3  
" (top) (2).....**2228**.\* 3MB3E4

CROSS-BLOCK GATE PUSHER..... †4MB3E1

†Note: The old GATE PUSHER or all broken parts of it must be returned for duplication.

MOLD BLADE (lower) (give point size)..... 1MC3E1

\*Can be applied without returning the Mold to our factory.

MOLD BLADE (upper) (give point size).....	2MC3E1
carrier.....	2MC3E2
" spring pin.....	895... 2MC3E4
" latch.....	2MC3E5
" fulcrum pin.....	2MC3E6
" spring.....	6213... * 2MC3E7†
" eye (2).....	* 2MC3E14
" lever.....	* 2MC3E12
" fulcrum pin.....	* 2MC3E13
" pin (stop for 2MC3E5).....	2MC3E15

†Note: If SPRING 2MC3E7 is wanted assembled with its two EYES 2MC3E14 order as SPRING 2MC2E7M.

MOLD-BLADE-CARRIER GUIDE BLOCK.....	* 3MC3E1
screw.....	2166... * 3MC3E2
" washer.....	440... * 3MC3E3

MOLD-BLADE STOP.....	7MC3E1
screw (2).....	2166... * 7MC3E3
" washer (2).....	440... * 7MC3E4

MOLD-BLADE TOP GUIDE.....	8MC3E1
screw (2).....	2208... * 8MC3E2

MOLD-BLADE SHOE (for 1MC3E1).....	9MC3E1
screw.....	2208... * 9MC3E2

MOLD-BLADE SHOE (for 2MC3E1).....	10MC3E1
screw (4).....	2208... * 10MC3E2

MOLD-BLADE GUIDE (left).....	* 18MC3E1
screw.....	2208... * 18MC3E2

TYPE BLOCK (right).....	1MD3E1
oil pad (felt).....	* 1MD3E5
plug screw (brass).....	2235... * 1MD3E7
" (brass).....	2239... * 1MD3E8
screw (bottom, from 1MA3E1) (2).....	2230... * 1MD3E11
" (rear, from 9MD3E1) (2).....	2229... * 1MD3E12
" (right, to 9MD3E1).....	237... * 1MD3E13

TYPE BLOCK (left) (5 to 7 pt.).....	2MD3E1
(left) (8 to 10 pt.).....	2MD3E2
(left) (11 to 13 pt.).....	2MD3E3
plug screw.....	2239... * 2MD3E6
screw (bottom, from 1MA3E1).....	2230... * 2MD3E7
" (rear, from 9MC3E1).....	2229... * 2MD3E9
" (right, to 9MD3E1).....	237... * 2MD3E32

TYPE-BLOCK GATE KNOCK OFF.....	* 6MD3E1
screw (2).....	260... * 6MD3E2

TYPE-BLOCK SQUARING PLATE.....	9MD3E1
plug screw (3).....	2235... * 9MD3E6
plug screw.....	2239... * 9MD3E7
screw (to 1MA3E1) (5).....	2261... 9MD3E8

\*Can be applied without returning the Mold to our factory.

## Mold Repairs

It is not possible for operators to repair MOLDS for they have neither the special tools nor necessary training.

If any defects occur in the type produced by this MOLD that cannot be corrected by following the directions in this folder, the *complete Mold* should be at once returned to us with *samples of the defective type*; enclose these in the box with the *Mold and all its parts*, prepay express charges and write us stating (a) point size, style, and number of MOLD; (b) date of shipment and route; (c) details of trouble.

### RESTORING TO HEIGHT

When a MOLD is returned to our factory, for any reason whatever, and we find after careful inspection, that it will not true up to produce a high quad above the low limit, the MOLD is restored to height, unless we are advised specifically by the customer not to do so.

### IMPORTANT

This MOLD is held in its box by two screws which pass through the bottom of the box. Preserve this box and its screws for returning MOLD. Do not nail the cover—tie it on.

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PHILADELPHIA, PA., U.S.A.



LEVER	2MC3E12
WASHER	3MC3E3
SCREW	3MC3E2
SPRING PIN	2MC3E4
GUIDE BLOCK	3MC3E1
SPRING	2MC3E7
SCREW (4)	10MC3E2
EYE (2)	2MC3E14
LATCH	2MC3E5
FULCRUM PIN	2MC3E6
SCREW	18MC3E2
GUIDE	18MC3E1
SHOE	10MC3E1
PIN (Stop)	2MC3E15
CARRIER	2MC3E2
MOLD BLADE (upper)	2MC3E1
SCREW	2MD3E9
SCREW	2MD3E7
SCREW	2MD3E32
TYPE BLOCK (left)	2MD3E1
PLUG SCREW	2MD3E6
SCREW (2)	6MA3E2
DOWEL (2)	6MA3E3
CAM	6MA3E1
SCREW (2)	3MA3E2
FRONT ABUTMENT	2MA3E1
SCREW (3)	2MA3E5
LOCK NUT (2)	2MA3E4
ADJ. SCREW (left)	2MA3E2
COUPLING	1MB3E2
SCREW	1MB3E3
GATE PUSHER	4MB3E1
SCREW (2)	3MB3E4
GATE BLOCK (left)	3MB3E1
OIL PAD	3MB3E2
SCREW (2)	3MB3E3

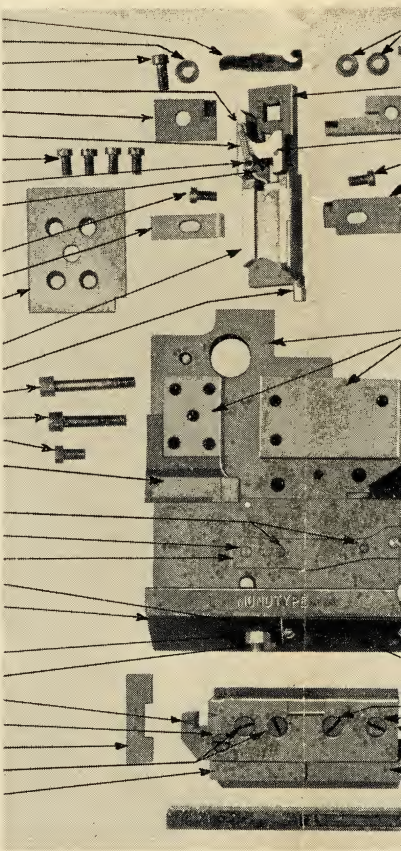


Figure 4.

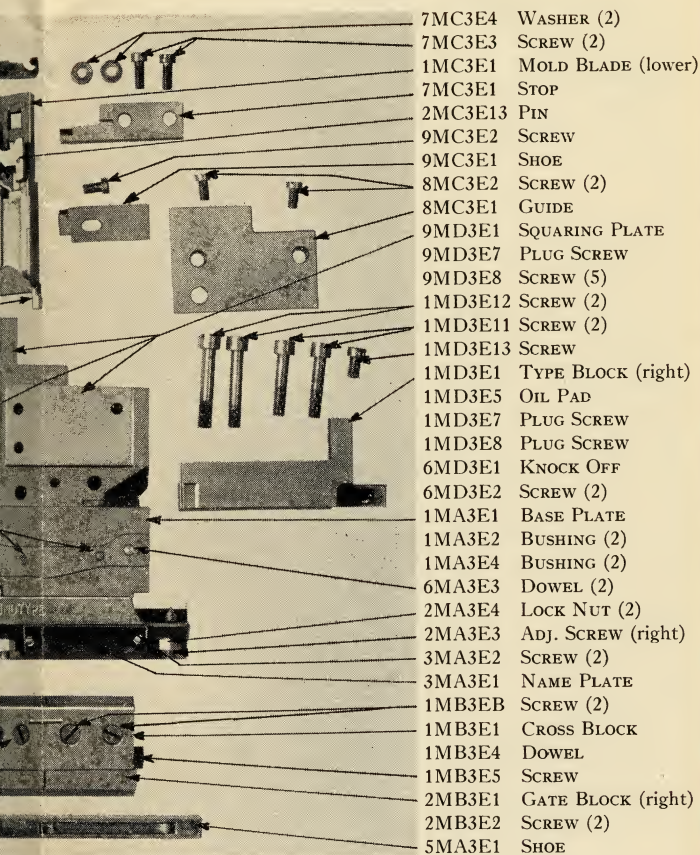


Figure 4.



